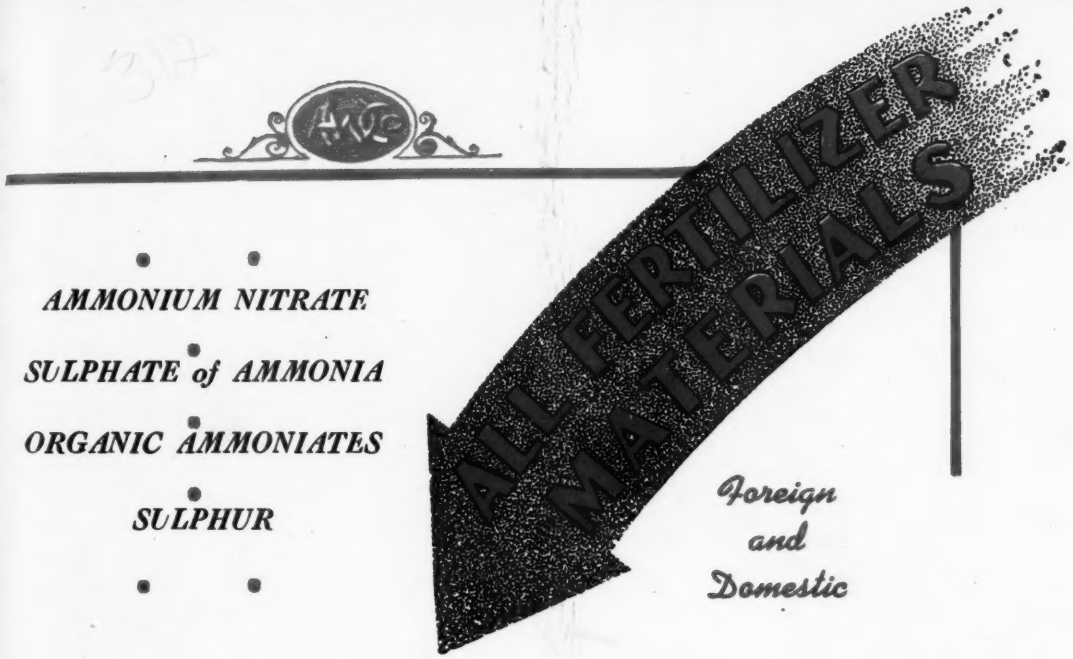
Vol. III No. 12 November 25, 1949

The American FERTILIZER



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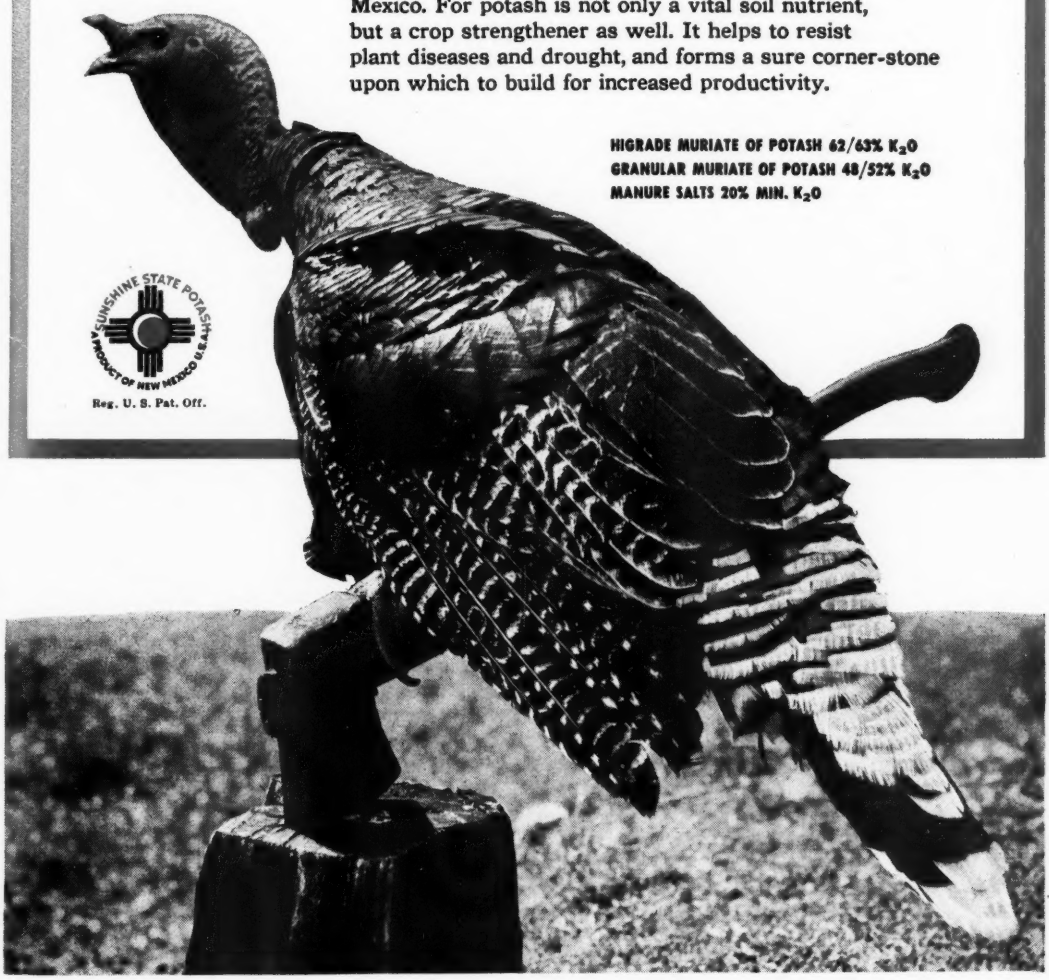

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Cayce, S. C.	Havana, Cuba	Savannah, Ga.
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Charleston, S. C.	Montgomery, Ala.	South Amboy, N. J.
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Carteret, N. J.	Greensboro, N. C.	National Stockyards, Ill.	Savannah, Ga.
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The American FERTILIZER

Vol. 111 NOVEMBER 26, 1949 No. 11

Fall Convention of the National Fertilizer Association

Well Attended Gathering in Atlanta Hear Reports of Favorable Prospects for 1950 and Discuss Ways to Further the Soil Improvement Program

WITH the prospect of another good year for American agriculture and for the fertilizer industry, more than 400 fertilizer executives met in Atlanta for the 23rd annual fall meeting of the National Fertilizer Association, on November 14th, 15th and 16th. Convention headquarters were in the Atlanta Biltmore Hotel and the general sessions on the mornings of November 15th and 16th were very well attended. A comprehensive program, which covered both the business and scientific phases of the fertilizer picture, was ably presented by outstanding speakers. A feature of the Convention was the presence, as guests of the Association, of the visiting British fertilizer production team who are making a 6-weeks' tour of inspection through a number of the eastern fertilizer plants. The leader of the group, John Higson Smith, gave an interesting picture of the British fertilizer industry today. His address is given in full elsewhere in this issue.

Monday, November 14th

The first day of the Convention was given over to a meeting of the Association's Board of Directors which was attended by more than 80 per cent of the Board's membership. Plans for Association activities were discussed, among which was the 1950 Annual Convention at the Greenbrier, White Sulphur Springs, W. Va., on June 12, 13 and 14, 1950.

On Monday evening, Ashcraft-Wilkinson Company were hosts to those attending the Convention at a barbecue held at the Druid Hills Country Club. As in previous years, the attendance was large, the food was delicious and the entertainment, provided by a noted Atlanta quartet, was outstanding.

Tuesday, November 15th

The opening general meeting was held on Tuesday morning with Ray King, Chairman of the Board of Directors, presiding. Mr. King reviewed the current situation and stated that the American farmer would have available for his use during 1950 a fertilizer output that would exceed the 1949 record by one and one-half million tons of mixed fertilizer.

Estimates of the Food and Agriculture Organization, said Mr. King, indicate that world-nitrogen production in 1949–1950 will be about 255,000 tons less than the planned consumption. Under these conditions, Mr. King said there would probably be less pressure to export nitrogen from this country than existed last year. "Our concern as an industry should be that this additional one and one-half million tons of mixed fertilizer and the additional 100,000 tons or so of top-dressing nitrogen will be consumed in our own country for necessary economic crop production." The speaker added that, on the whole, presently contemplated price supports for 1950 would certainly not portend any drop in fertilizer consumption.

Mr. King also called attention to the plans of the Association to celebrate in 1950 the 100th anniversary of the compounding of mixed fertilizer in the United States and asked

all members to cooperate in its observance during the year.

The guest speakers at the Tuesday session were F. W. Parker of the U. S. Department of Agriculture, W. F. Watkins of the Economic Cooperation Administration, John Higson Smith, works manager of Fisons, Ltd., Ipswich, England, and W. R. Thompson of Mississippi State College. Mr. Smith's talk is reported in full elsewhere in this issue. Abstracts of the other addresses follow herewith.

Trends in Soil Fertility in the United States

By F. M. Parker

Assistant Chief, Bureau of Plant Industry, Soils and Agricultural Engineering, U.S.D.A., Beltsville, Md.

Soils may deteriorate or may be improved by changes in the soil that are hardly noticeable. Among the more important changes are those associated with the supply of available nutrients, soil reaction and content of organic matter. The trends in such changes in different sections of the United States are considered in some detail following a discussion of the great variation in native fertility of United States soils.

Recent data indicate the removal of nitrogen and potash by harvested crops exceeds the quantity returned in fertilizers and farm manures by 80 and 55 per cent, respectively. The return is greatest in the eastern and southern States, exceeding removal in many States. Return in the Great Plains, on the other hand, approximates 10 per cent of crop removal. The return of phosphorus exceeds crop removal by about 50 per cent. Return exceeds removal by 400 per cent or more in nine States and 200 per cent in an additional twelve States, but is less than 20 per cent in most of the States of the Great Plains.

Studies on changes in soil composition and comparisons of cultivated and virgin soils indicate major changes in soil fertility are taking place. The nitrogen and organic matter content of many soils of the Corn Belt and Great Plains has declined 25 to 50 per cent with a substantial decline in inherent productivity. This decline is continuing. On the other hand, the mineral status of many soils in the South and East has been greatly improved by fertilization and liming. These improvements are being reflected in the results obtained in various State soil testing laboratories.

Changes in crop yields reflect many of the factors that influence yields of which soil fertility is one of major importance. National average yields of several major crops remained about constant for a period of sixty years despite many improved practices that were introduced. During the last 10 to 12 years crop yields have steadily increased and are currently about 35 per cent above the long-time prewar average. This improvement has been concurrent with a great expansion in the use of fertilizers and lime, more attention to soil conservation and other improved practices. It indicates that good soil management and improved fertility pays off. It also indicates that as a nation we can still make very substantial advances in the efficiency as well as volume of crop production.

ECA Assistance to Increased Productivity in Europe

By W. F. Watkins

Chief, Fertilizer, Seeds and Pesticides Branch, Food and Agriculture Division, Economic Cooperation Administration, Washington, D. C.

One of the main objectives of the Economic Cooperation Act of 1948 is to promote agricultural production. Action on this objective is in progress and the foundation has been laid for greater intensification of agricultural expansion and adjustments.

The technical possibilities for expansion of agricultural production lies mainly in increasing yields per acre and also in reclamation of lands not fully utilized in the past. With a population of 270 million people it is imperative that all land be made to produce efficiently and economically the maximum amount of food and feed.

The greater use of commercial fertilizer is basic in increasing agricultural production. Even though Northwest European countries use more commercial fertilizer than any other similar area, there is plenty of room to use more. England and Norway are now using 2½ to 3 times the prewar amount. Several countries, however, are still using very little fertilizer. There is a close relation between farm prices and the use of fertilizers. Fertilizer prices need to be reduced, especially in some countries, through efficient production and distribution to obtain the maximum use.

Many other agronomic and cultural practices are being improved to increase agricultural production. The recent survey showed that the use of hybrid corn would give results comparable to the 25 per cent and larger increases which we have obtained in the United States. In 1949 Italy used 80,000 bushels of hybrid seed corn compared with 2,000 bushels in 1948. The productivity of grassland, both permanent and rotation grass, can be increased in the order of 40 per cent

or more. Progress is being made in conserving grass and other forage crops by use of silos and drying grass as high protein feed. Success with grassland improvement will depend on adequate supplies of fertilizer at reasonable prices. The use of improved varieties of crops and control of crop pests with agricultural pesticides are also being used to increase agricultural production.

Farmers can only be induced to embark on expansion of agricultural production programs by having the basic technical facts. This is and will be accomplished by expanding and strengthening the educational advisory services. Further, more adjustments in price policy are taking place to make it economically profitable to farmers to produce in a free competitive world market.

Insuring Your Two Futures

By W. R. Thompson
Associate Leader, Extension Agronomy, Mississippi State College

Soil erosion is the South's worst problem. Good pastures will remedy not only this situation but also will make the soil rich, produce nutritious feed and bring profits to the farmer. You cannot wear out soil with livestock. A satisfactory pasture program should consist of four points: a well-developed plan; adequate fertilization; good seeding; and proper management, including proper insect control methods. An omission of any one of these points will lead to certain failure.

The fertilizer salesman is truly a service man, for without fertilizer the farmer of today would be hopelessly lost. Grass will not grow without fertilizer. Mississippi last year used 488,000 tons of fertilizer but could use over 4 million tons for pastures alone.

Many forward looking developments are under way, but the North Carolina corn fertilization program is probably the best agricultural project ever started in the South.

Annual Dinner

The annual industry dinner, held on Tuesday evening, was well attended and ably presided over by J. E. Totman, vice-chairman of the board. The Hospitality Committee deserves congratulations for the excellent entertainment provided, which included an accordionist, a mentalist act, a puppet show,

(Continued on page 28)

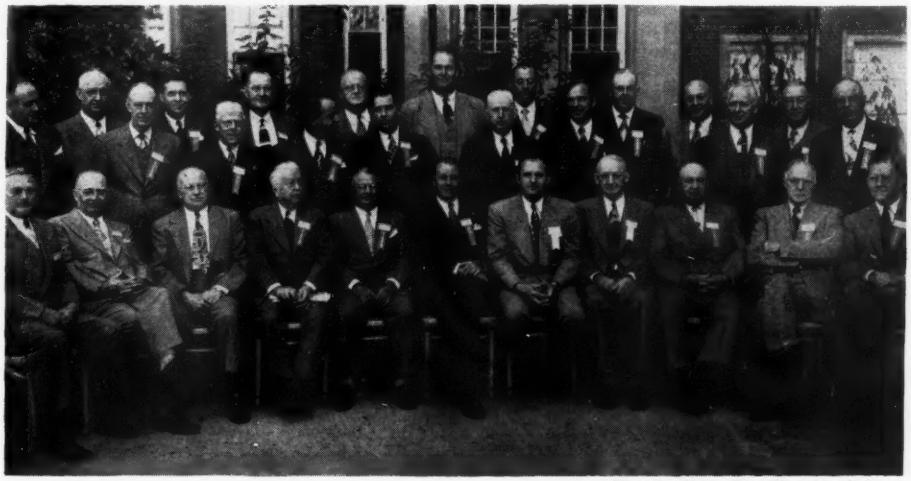

Photo by National Fertilizer Association

OFFICERS AND MEMBERS OF THE BOARD OF DIRECTORS OF THE NATIONAL FERTILIZER ASSOCIATION AT THE SOUTHERN CONVENTION IN ATLANTA

Seated: E. S. Russell, South Deerfield, Mass.; J. H. Epting, Leesville, S. C.; Walter E. Meeken, Boston, Mass.; Robert S. Cope, Savannah, Ga.; J. E. Totman, vice-chairman, Baltimore, Md.; Ray L. King, chairman, Valdosta, Ga.; Russell Coleman, president; D. S. Murph, secretary-treasurer; C. D. Shallenberger, Shreveport, La.; James W. Dean, Knoxville, Tenn.; and John A. Miller, Louisville, Ky. Standing: A. A. Schultz, Reading, Pa.; C. R. Martin, Dayton, Ohio; H. A. Parker, Sylacauga, Ala.; C. T. Prindeville, Chicago, Ill.; B. B. Fall, Portland, Conn.; J. L. Nichols, Sumter, S. C.; E. A. Geoghegan, New Orleans, La.; Ralph E. Fraser, Bangor, Maine; M. G. Field, Hattiesburg, Miss.; Elbert N. Carvel, Laurel, Del.; A. W. Weaver, Norfolk, Va.; J. H. Owens, Roanoke, Ala.; L. D. Hand, Pelham, Ga.; Moultrie J. Clement, Pensacola, Fla.; L. Graham Campbell, Cranbury, N. J.; John E. Powell, Columbus, Ohio; F. N. Bridgers, Wilson, N. C.; and H. B. Fultz, Miami, Fla.

Commercial Solvents to Build New Insecticide Plant

A new insecticide plant for the large-scale production of Lindane, the pure gamma isomer of benzene hexachloride, is to be constructed at Terre Haute, Indiana, it was recently announced by Commercial Solvents Corporation.

The Lindane production unit will be located adjacent to the present benzene hexachloride plant and will utilize the latter's production of technical grade material for the extraction of the gamma isomer. The present plant is to be expanded to effect an estimated increase in production of twenty-five per cent and will permit the continued marketing of the technical product. The insecticide projects are estimated to cost about $500,000.

It is expected that expansion of the present benzene hexachloride plant will be completed within six months, while large-scale production of Lindane will be under way within a year.

The U. S. Department of Agriculture recently adopted the name Lindane for the gamma isomer of benzene hexachloride of a purity not less than 99 per cent. This highly refined product is recommended by the Department's entomologists as the preferred material for use in fly control in dairy barns. A potent stomach, contact, and fumigant insecticide, Lindane is virtually odorless, gives a quick kill of flies, controls flies which are immune to DDT, and has only one-fourth the chronic toxicity of DDT. It is not absorbed by milk.

The technical grade benzene hexachloride is used successfully against a large number of agricultural insects, particularly cotton pests, and for the control of mange, lice, ticks, and flies attacking domestic animals.

Spencer Chemical Company Appointments

The Spencer Chemical Company has announced the promotion of Charles L. Monson to the position of sales representative of the Agricultural Chemical Sales Department, with headquarters in Atlanta, Ga. Mr. Monson, for the past year, has been located in Spencer's Executive and Sales Office in Kansas City. He is a graduate of Friends University in Wichita, Kansas, and prior to joining Spencer was manager of Monson's Feed, Seed and Farm Supply Company in Wichita.

Another addition to the Agricultural Chemical Sales Department is E. F. McGill, who will work out of the home office in the Dwight Building, Kansas City, Mo. Previous to his joining Spencer, Mr. McGill was Plant Chemist at the Wahoo, Nebraska, Plant of Emergency Export Corporation. He attended Creighton University, Omaha, Nebraska and Miami University, Oxford, Ohio. During World War II he served three years as a Naval officer.

Davison Chemical Starts Sales Contest

On November 12th, the Davison Chemical Corporation of Baltimore, Maryland were hosts in Cincinnati at the Netherland Plaza to about 75 sales executives and salesmen of its Mixed Fertilizer Division, representing all its plants in the East, South, and Midwest.

The meeting was held to present what is believed to be the first Sales Contest for Agents ever initiated in the fertilizer business. The "Feather Your Nest" prize contest is in the interest of advancing fertilizer sales during the winter and early spring months to eliminate production peaks created by seasonal demand. The 1950 spring fertilizer demands could exceed the national plant capacity at that time and make it impossible to supply the farmers requirements.

Davison fertilizer plants are located at Baltimore, Md.; Columbus and Alliance, Ohio; New Albany, Ind.; Perry, Iowa; Nashville, Tenn.; Savannah, Georgia; and New Orleans, La.

Prock to Head Phillips Los Angeles Sales Office

K. S. Adams, president of Phillips Petroleum Company and Phillips Chemical Company, has announced the appointment of Robert B. Prock as manager of the Los Angeles district of Phillips Petroleum Company's fertilizer sales division.

Prock graduated from the University of Oklahoma in 1940 with a B.S. degree in business. Following his graduation, he worked in Honolulu, and joined the Army quartermaster corps at the start of World War II. After his discharge as a Major in 1945, Prock joined Atkins, Kroll and Company at San Francisco as sales representative.

The district sales office location in the Los Angeles area is now being selected. Prock, as manager of the office, will handle sales of Phillips 66 ammonium sulphate, ammonium nitrate, nitrogen solutions and anhydrous ammonia.

Some British Fertilizer Problems*

By John Higson Smith

Leader, United Kingdom Fertilizer Manufacturing Team, and Works Manager, Fisons Ltd., Poole, England

IN OPENING my address I would like to say how pleased we are to have this opportunity of joining in your fall convention and meeting such a distinguished cross section of your industry. I am also very conscious of the honor you do me in asking me to address you today.

The subject of may address was given to me in Washington last week as "Some of the Problems in the British Fertilizer Industry." This gives me a pretty wide scope as our problems are many. I suppose the main problem is that we have 50 million people and can only feed about one-half of them. I will deal with particular problems in the fertilizer industry with which we are faced.

During the war there was a tremendous demand for increased food production for obvious reasons resulting in an equal demand for fertilizer materials, and this had to be produced with existing plant and so far as was possible without significant increase in personnel. It is with pride that I am able to say that we more than doubled the output of fertilizer in the ten years from 1939 to 1949.

This increase, however, was not achieved without severe deterioration of machinery to which, of course, must be added the not inconsiderable quantity of plant destroyed in air raids. This must now be replaced. There was, of course, a very large quantity of housing destroyed, and the government gave the replacement of homes the first priority with diversion of raw materials for that purpose. Hence, shortages of building materials and government restrictions on capital expenditures has up to recently been one of our main problems. I understand that there has now been a change in government policy and priority is now being given for building materials to industry concerned with manufacture for export or food production.

It is significant that fertilizer consumption per acre of arable land has also doubled in the last ten years but there is still tremendous room for additional consumption. Holland and Belgium are even now still much heavier users of fertilizer than ourselves. The need therefore, for intensive effort in educating and advising the farmer on the fertilization of his crops is very real indeed. In this connection I was most impressed with the efficient organization for this work of which I obtained a brief outline at your Association offices in Washington last week.

Granulated Fertilizer

I know you are all waiting to hear something about granulation of fertilizers which is now taking such a prominent part in fertilizer technique in Britain at the present time. First, may I indicate why we turned to this method of manufacture. With the increased demand for fertilizers two immediate steps were needed; firstly, a large proportion of our production had to be put out of the factory as it was made, due to the lack of available space for manufacture; and, secondly, the dispatch load during the early spring had to be spread over a greater period to gain the increased output from packing plants.

These two steps soon led us into trouble as with the damp climate the fertilizer did not keep too well in the bags. This being further aggravated by the fact that with increased output from existing factory space the curing period had to be reduced. It was found that by granulating a completely conditioned fertilizer could be produced without curing and not only solved many of our internal problems of space limitations, shortage of organic fillers and conditioning agents, but also provided the farmer with an easily handled material for sowing on his land.

Furthermore, Dr. Ogg—whom I have no doubt many of you have met in his capacity as the director of the research farm at Rothhampstead—has indicated that water-soluble phosphates are rapidly locked up in the soil in a form not readily available to the plant. Thus fertilizer wrapped up in a pellet form, presenting less surface area, will be available to the plant growth for a longer period.

Unfortunately we are handicapped in Great Britain by an old legislation which requires superphosphate and compound fertilizers to

(Continued on page 24)

*An address at the 23rd Fall Meeting of The National Fertilizer Association, Atlanta, Ga., November 14–16, 1949.

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Potato Price Support Program for 1950 Announced

A 1950 price support program for Irish potatoes, continuing price support at the 60 per cent-of-parity level in effect this year and setting a lower national commercial acreage allotment of 1,137,800 acres for 1950, was announced on November 16th by the Production and Marketing Administration.

These steps, taken in recognition of decreased potato consumption and increased yields per acre, are designed to effect a better balance between potato production and requirements.

Under the provisions of the Agricultural Act of 1949, Irish potatoes must be supported at a level ranging from 60 to 90 per cent of the parity price. The 60-per cent level announced today for 1950 is a continuation of the percentage level used in 1949 but will result in a lower dollars-and-cents figure because of the new parity computation. On the basis of data now available, the average support price for Irish potatoes in 1950 will be $1.60 per hundredweight (about 96 cents per bushel). The support price cannot be less than this figure and may be slightly above it, depending on the actual parity level on January 1, 1950, on which the support price will be based. The average support price for 1949-crop potatoes was $1.80 per hundredweight (about $1.08 per bushel).

The national production allotment for 1950 is set at 335 million bushels. This is enough to provide an average per capita potato supply of about 110 pounds, as compared with an estimated average food use per person of 103 pounds from the 1948 crop. The 1949 crop is currently estimated at 387 million bushels.

The total national commercial acreage allotment of 1,137,800 acres for 1950 is 85,300 acres less than in 1949. This acreage includes a national reserve of one-half of 1 per cent of the production—or about 5,000 acres at assumed yields per acre—which has been witheld for issuance to new farms in irrigation or reclamation areas. While the commercial acreage allotment is 7 per cent less than in 1949, the production allotment is only 4 per cent less, reflecting the use of higher "normal" yields per acre in deriving the acreage allotments. At these indicated higher yields the commercial acreage allotment, in combination with normal production on non-commercial potato farms (less than 3 acres), should result in a crop of approximately 335 million bushels.

The 1950 apportionment among States of commercial acreage was made according to the same formula used in apportioning the 1949 acreage, except that the base periods used in determining production, excess acreage, surplus, and yield per acre were moved forward oneyear.

Growers have been reminded that the development and use of marketing agreements and orders in all commercial producing areas will be a prerequisite to eligibility for price support. This is a continuation of the policy announced for the 1949 crop, which stated that, "in areas where such programs are feasible, eligibility for price support will be conditioned on having appropriate marketing agreements and orders in effect and in operation," and that "it should be possible for all such areas to have programs in operation for 1950."

Margeson Elected Director of International Minerals Chemical Corporation

James P. Margeson, Jr., executive vice-president of International Minerals and Chemical Corporation, was recently elected a director of the corporation at the regular quarterly meeting of the board of directors, according to an announcement by Louis Ware, president. Mr. Margeson will fill the unexpired term of Francis M. Weld of White, Weld & Company, New York City, who was killed in an airplane accident recently.

Mr. Margeson has been associated with International Minerals & Chemical Corporation since 1940 and has been executive vice-president of the company since June 26, 1947.

Arkell & Smiths Celebrate 90th Anniversary

Arkell & Smiths, the oldest manufacturer of paper bags, celebrated their 90th anniversary recently by staging an eminently successful "open house" in their two paper bag plants at Canajoharie, N. Y. Thousands of their Mohawk Valley neighbors toured the two plants and viewed the modern bag making machines in operation turning out multiwall bags, flour, sugar, coffee and other speciality paper bags.

On display were James Arkell's original bag tubing and bottoming models and patents. These patents have been the basis for the design of all bag making machines. Current machines throughout the industry are adaptations of the fundamental principles established by James Arkell in these patents. In all, Mr. Arkell was granted 32 patents covering his paper bag developments.

Another interesting feature of the "open house" was a packaging exhibit featuring animated demonstrations of the effectiveness of the Sta-Stak creped multiwall bag and the new Plasto-Pak polyethylene kraft lined bag which affords completely moisture-proof protection to hygroscopic materials.

Similar 90th Anniversary celebrations and "open houses" are planned for the other A. & S. plants at Wellsburg, West Virginia and Mobile, Alabama.

Lindsay Joins Buhner Fertilizer Staff

The Buhner Fertilizer Company has announced the appointment of Jack K. Lindsey to the position of Illinois Sales Manager. He will have his headquarters at Danville, Ill. Mr. Lindsey was formerly mid-western sales representative for the Spencer Chemical Company.

Indian Jute Mills Association Fighting Black Market in Burlap

An unprecedented series of measures designed to hold ceiling prices, speed shipments and prevent black market operations in the world's burlap trade was recently announced by a mission representing the Indian Jute Mills Association.

Difficulties in the trade as a result of the differences in currency devaluation policies of the Indian and Pakistan Governments were explained at a press conference by Alexander Low and William D. Bryden, who arrived in New York to make a survey of the burlap trade and market conditions and to establish a permanent liason office as a means of improving service to the U. S. market which absorbs about 60 per cent of India's total burlap production. India's burlap exports provide that country with 61 per cent of her dollar exchange.

With India having devalued her currency and Pakistan holding firm against devaluation, the supply of raw jute from Pakistan to the Indian mills has temporarily ceased. As a result of this and for other reasons the shipment of burlap to the United States has virtually halted. Most of the world's jute is grown in Pakistan and the bulk of mill facilities is located in India.

To meet the emergency, the Indian Jute Mills Association, which represents 95 per

cent of India's production capacity, has adopted a four-point program, Low said.

"This program calls for stabilization of prices as set by the Government, mobilization of transport facilities in India to speed shipments of India-grown jute to our mills, elimination of harmful speculation in goods and maintenance of exports to give India the added foreign exchange she needs to build her internal economy and to enable her to buy more from the United States. Our mills are not only determined to hold to the Government-set ceiling prices but as soon as it is feasible, we hope to reduce prices."

Dramatic steps, Low added, have been taken to meet the supply problem and to prevent hoarding by speculative interests. Burlap now being held on speculative account must be shipped within two months of contract due date or be penalized by high warehouse charges. On all new contracts, mills will sell to shippers only and on condition they move the goods within due date. Failing this, the goods will be resold with any resultant losses to be charged to the original buyer's account.

"From a trade point of view," he added, "this represents a major step forward in the Mills' marketing methods. It will eliminate speculators and provide for the orderly export of burlap to the U. S. and other markets."

Before separation of India and Pakistan, jute agriculture was unified with the raw product being largely grown in East Bengal and then shipped to West Bengal where it was processed and exported. Division of the single province into two separate countries has accounted for the present difficulties between Pakistan and Indian interests. Growing of jute in India is now being greatly extended but the yield is still far from sufficient to keep the mills in full production. The mills, according to Low, are hopeful that an agreement can be worked out eventually to resolve the problem but in the meantime the flow of burlap offers to the United States has virtually ceased.

"In full realization of the seriousness of the situation," he said, "vigorous steps are being taken by the Indian Jute Mills Association with the full support of the Indian Government and in consultation with the trade interests in the United States to insure an adequate supply and regularity of delivery."

Normally the United States each year imports 450,000 tons of burlap and other jute products from India amounting to approximately $100,000,000 for the manufacture of bags, cotton bale coverings, packing materials and for other industrial uses.

Program for Ohio Fertilizer Conference

Arrangements have been completed for the annual Ohio Fertilizer Conference to be held on December 2nd in the State Office Building, Columbus, Ohio. This meeting is always well attended by fertilizer executives, county agents, agronomists and other agricultural officials.

Talks scheduled for the morning session, beginning at 9:30, include "Symptoms of nutrient deficiencies in crops" by J. D. Sayre; "Soil structure as a factor in crop yields and economic production" by J. B. Page; "Soil organisms as a factor in soil productivity" by W. P. Martin, "Lime as a factor in fertilizer response," by M. A. Bachtell.

The afternoon session will start at 1 o'clock and will include "Highlights in fertilizer usage in the North Central States "by Zene Beers; "Vegetable crop fertilizers" by Victor E. Kierns; "Corn fertilizer results" by Chester E. Evans; "Trends toward grass land farming and fertilizer usage" by D. R. Dodd. The meeting will end with a period for general discussion.

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FERTILIZER MATERIALS MARKET

NEW YORK

End of Steel Strike Increases Sulphate of Ammonia Production and Spot Material Now Available. Supply Situation Improves in all Materials, Due to Mixers Not Taking Shipments on Schedule. Organic Materials Show Declining Tendency

Exclusive Correspondence to "The American Fertilizer"

NEW YORK, November 23, 1949

Sulphate of Ammonia

With the steel strike over and coke ovens again in production, the supply was adequate to fill all demands and synthetic production was heavy. While the large number of buyers are under contract for their season's requirements, material was freely offered for prompt shipment at regular prices.

Nitrate of Soda

Not much activity was noted in this material but a better demand was looked for after the turn of the year, as many buyers are holding off taking material into their plants.

Ammonium Nitrate

Some producers are having difficulty in getting buyers to accept shipments on contract and the supply situation is much better than it has been in some time.

Nitrogenous Tankage

Most producers are sold out until the end of this year, with one producer reporting selling their entire production through the first quarter of next year. Prices range from $3.60 to $3.75 ($4.37 to $4.56 per unit N), according to shipping points.

Castor Pomace

No offerings were reported of this material and the demand was heavy from various sections, with last sales at $24.00 per ton, f. o. b. production points.

Organics

Low priced organics were in good demand with some shortages reported, while high-priced organics showed a declining tendency. Tankage and blood were quoted nominally at $8.00 per unit of ammonia ($9.72 per unit N), f.o.b. Eastern shipping points, with some sales being made actually under these figures. Feed buyers for the most part were out of the market. These prices were too low to bring any South American material in. Linseed meal was the only vegetable meal to show any strength and the market advanced slightly and some mills were sold out for nearby shipment. Soybean meal was in good supply and some price shading was reported, last sales being at $56.00 per ton, f.o.b. Decatur, Ill., in bulk. Cottonseed meal was bought by the feed trade at steady prices.

Fish Meal

This material was slightly lower in price because of the good supply situation, with the Pacific Coast offering fairly substantial quantities at prices around $2.40 per unit of protein, f.o.b. Western points. Some imported fish meal arrived recently at Atlantic ports which helped keep the price down.

Bone Meal

While fertilizer bone meal was in good demand, the demand for the feeding grade has fallen off recently, due to the drop in feed prices in general. Several large lots of imported feeding bone meal have arrived.

Hoof Meal

A fair demand was noted for this material and stocks are light at production points. Last sales, $7.50 per unit of ammonia ($9.12 per unit N), basis f.o.b. Chicago.

Superphosphate

No price changes were noted but stocks in the hands of producers are increasing because of the slow movement to mixing plants. Shipments are running behind last year and it is hoped that mixers will take delivery of

contracts at a faster rate in order to relieve the storage situation at production points.

Potash

Some French potash was reported to have been offered at a price slightly higher than the domestic market. Most buyers are pretty well covered on their requirements.

PHILADELPHIA

Materials Markets Quiet. Farmers Late in Ordering and Late Spring Bottleneck Feared. Some European Potash Offered

Exclusive Correspondence to "The American Fertilizer"

PHILADELPHIA, November 21, 1949

Markets in practically all raw materials are exceedingly quiet and factories are overstocked with materials and mixtures awaiting shipping orders which are distressingly late. It is feared this lack of interest on the part of farmers may react unfavorably when the spring season comes around.

Sulphate of Ammonia.—While coke-oven production is increasing, the demand is weak. Restricted production during the coal and steel strikes seems to have had no unfavorable effect in the trade.

Nitrate of Soda.—Demand continues at seasonal low and the supply is equal to all requirements.

Blood, Tankage, Bone.—The market in blood and tankage is much easier and price range is rather irregular at $7.50 to $8.00 per unit of ammonia ($9.12 to $9.72 per unit N). Bone meal is still being quoted at about $65.00 per ton but trading is limited, and imported bone is being quite freely offered.

Castor Pomace.—Shipments are again restricted to standing contracts and while there is some demand for the material, no new business is possible at present.

Fish Scrap.—Market is very quiet with interest weak. Sixty per cent meal is quoted at $170.00 to $175.00 per ton.

Phosphate Rock.—The supply is plentiful but acidulators are tardy in ordering out shipments of rock, due to excessive inventories of superphosphate.

Superphosphate.—Absence of farmer orders for their spring requirements has curtailed production and shipment, and goods are backing up on the acidulators to the point where their storage capacity is exhausted. No price changes are noted.

Potash.—Current movement is confined principally to contracts, with little demand at present for additional supplies. Russian offerings are reported at prices considerably higher than recent French offerings. Domestic production seems quite sufficient to meet present requirements.

CHARLESTON

Farmers Holding Off on Fertilizer Orders for Next Spring. Materials Accumulating at Producers' and Mixers' Plants. Little Price Change

Exclusive Correspondence to "The American Fertilizer"

CHARLESTON, November 21, 1949

Practically all fertilizer manufacturers are primarily concerned with the slow demand for mixed fertilizers which they expect will become heavy in the next few months, resulting in a compressed shipping period which will tax their facilities to supply the total demand. At present, fertilizer mixers' storage facilities are heavily crowded.

Organics.—Demand for organics by the feed trade continues slack particularly in ground blood and tankage, but prices of these

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ammoniates continue too high to interest fertilizer buyers. Fertilizer ammoniates are in active demand and the market strong. Domestic nitrogenous is quoted at $3.50 to $4.00 per unit of ammonia ($4.25 to $4.86 per unit N), in bulk, depending on shipping point. Imported nitrogenous tankage is nominally around $4.50 to $4.70 per unit of ammonia ($5.47 to $5.71 per unit N), in bags, c.i.f. Atlantic and Gulf ports.

Castor Pomace.—All producers continue sold up and movement is against current contracts. Demand continues greater than supply. Price is nominally $24.00, f.o.b. New Jersey shipping point, on which basis the last sales were made.

Dried Ground Blood.—New York market is quiet at $8.00 per unit of ammonia ($9.72 per unit N), with the Chicago market at around $7.50 per unit of ammonia ($9.12 per unit N), in bulk.

Potash.—Prices continue unchanged and production coincides with contract commitments. In some sections, due to storage difficulties, consumers have requested delayed shipment, whereas other sections are asking for stepped-up shipments.

Ground Cotton Bur Ash.—This material continues at around 75 cents per unit of K_2O, in bulk, carload lots, f.o.b. Texas shipping points. Material now tests an average of 30 per cent K_2O in carbonate form, particularly suitable for growing shade-grown tobacco.

Phosphate Rock.—Stocks continue ample for domestic requirements and the market remains steady, although movement to acidulators has been curtailed in certain sections.

Superphosphate.—Due to overtaxed storage facilities, some acidulators have had to curtail production as farmers have been holding back calling for fertilizers.

Sulphate of Ammonia.—With the steel mills again operating, coke oven production has increased considerably. The recent curtailment of production due to the strike has not created any shortage as the demand for mixed fertilizers has been quite slack.

Ammonium Nitrate.—Prices continue unchanged and demand steady, taking care of the available supply.

Hoof Meal.—Chicago market is quiet with last sales being made at $7.50 per unit of ammonia, ($9.12 per unit N), Chicago basis. South American material is offered for fall shipment at $6.50 per unit of ammonia ($7.90 per unit N), c.i.f. Atlantic port.

Nitrate of Soda.—Stocks are adequate and demand slightly less than the usual seasonal rate.

CHICAGO

Demand for Feeding Organics Declines Sharply. Selling Pressure Brings Price Cuts

CHICAGO, November 21, 1949

The midwestern market on animal ammoniates declined rather sharply during the past two weeks and at present is in a rather weak position. Finished product is moving very slowly and, consequently, grinders and mixers are showing very little interest in unground products. Pressure to sell is beginning to manifest itself and as a result list prices are being cut in some instances. It is anticipated that this condition will continue for the immediate future or at least until the feeding demand shows considerable improvement.

Ground and sacked meat scraps, minimum 50 per cent protein, are listed at $95.00 per ton but limited sales have been reported as low as $90.00 per ton. Digester tankage in bags is listed at $110.00 to $115.00 per ton, but this product likewise can probably be bought at a discount on a firm basis. Dry

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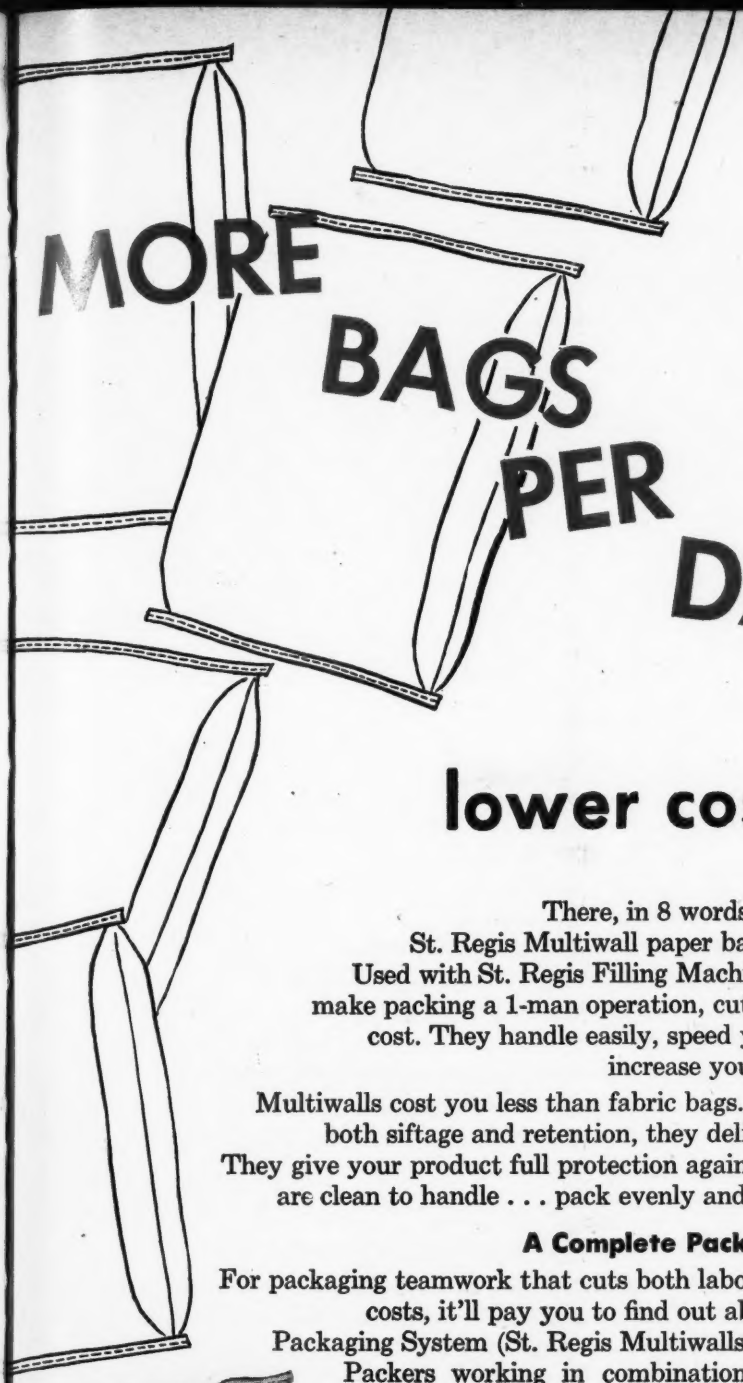

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Dried blood is generally held at $7.75 per unit of ammonia ($9.42 per unit N), but sales are reported at $7.50 ($9.12 per unit N). Steamed bone meal, 65 per cent B.P.L., is steady at $65.00 to $70.00 per ton and raw bone meal, 4½ per cent ammonia, 45 per cent B.P.L., at $70.00 to $75.00 per ton.

Idaho Phosphate Mining Methods Described

Although southeastern Idaho's large phosphate rock deposits now yield more than three-quarters of the entire western production of this important mineral commodity, their full commercial exploitation depends upon further improvements in mining and metallurgical practices, according to a publication released on November 17th by the U. S. Bureau of Mines dealing with methods and costs of mining phosphate rock in Bear Lake and Caribou Counties.

Under present-day mining and processing methods, the reserves of phosphate rock in southeastern Idaho are estimated at 230,000,000 tons. Much of the phosphate now mined there comes from two large mines operated by companies which also have the necessary processing plants for the manufacture of fertilizer. Of a total annual production of about 905,000 tons in 1947, western fertilizer plants absorbed 23 per cent, the remainder being exported.

Since the production of superphosphate fertilizer by current acid treatment methods requires a relatively high-grade phosphate rock, private companies and Government have directed their research toward the use of lower-grade material. Development of processing or a use pattern permitting the profitable mining of lower quality rock would not only reduce the unit cost of mining, but would also open the way to fuller exploitation of the area, the report points out. However, in searching for metallurgical improvements, consideration should be given to saving valuable components of the rock such as vanadium and fluorine, it adds.

Noting that about 75 per cent of the Idaho tonnage is now produced by strip-mining methods, the publication also discusses the feasibility of such other mining techniques as shrinkage stoping, square-set stoping, top slicing, room-and-pillar and long-wall methods and caving methods—practices which may come into use at a later date. A summary of estimated mining costs involved in each of the methods is also included in the report.

In describing the principal phosphate rock deposits of southeastern Idaho, the 18-page publication also gives the estimates of local reserves and deals with such topics as the history and geology of the area.

Free copies of Information Circular 7529, "Phosphate Rock Mining in Southeastern Idaho" by D. W. Butner, Bureau mining engineer, may be obtained by writing to the Publications Distribution Section of the Bureau of Mines, 4800 Forbes Street, Pittsburgh 13, Pa.

Mineral Deficiencies On Corn Show Up at Harvest Time

The harvest season is the best time of the year to observe results of mineral deficiencies in final corn yields and begin to plan next year's program to supply all the necessary elements for a satisfactory crop, says J. D. Sayre of the agronomy department of the Ohio Agricultural Experiment Station, Wooster, Ohio.

Deficiency symptoms of nitrogen, potassium, and phosphorus in corn plants are always accompanied by decreased yields.

Calcium and magnesium are two minerals which may be low in young corn plants due

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to restricted absorption but which are plentiful in mature plants, continues Sayre. Calcium deficiency results in torn or ragged leaf tips when the leaves are finally unrolled and mature. Magnesium deficiency shows up as streaks or mottled areas between the veins where chlorophyll is contained. Both symptoms may show up as the leaves are unrolling in rapidly growing plants but they completely disappear when plants are fully grown. There is no evidence that either of these mineral deficiencies, under the conditions described, cause any yield reductions.

Corn is a rapidly growing crop plant if weather conditions are favorable in the spring, and may grow so rapidly that the root systems are too restricted to invade soil areas where mineral elements are available. Consequently, young plants may have several common mineral deficiencies which will disappear completely in larger plants. When their root system is well established in the soil, most of the early deficiencies will disappear if the soil is at all fertile and the plants will continue good growth.

Fertilizer Pays on Texas Oats

Hamilton County (Texas) farmers are finding that they can put more sacks of oats in the barn by using fertilizers under their crops. Hamilton County Agent E. R. Lawrence says final reports from demonstrations conducted the past season shows what can be done.

Elmo Newsom applied 200 pounds of 16–20–0 per acre at seeding time and harvested 99 bushels of oats per acre. On another two-acre block, he used 200 pounds of 0–20–0 at seeding time and harvested 82 bushels per acre. On a third two-acre block, he applied 200 pounds of 16–20–0 in March and harvested 77 bushels per acre. The check plot yielded 55 bushels per acre.

The plots where the fertilizers were applied in the fall made from twice to three times the growth that unfertilized oats made. They were almost shoulder high at harvest time. During the entire growing period, they had a better color and developed a much heavier root system, says Lawrence.

E. B. Stiles broke a block of land in the early spring and applied 200 pounds of 16–20–0 per acre. The application was made with an attachment on his mold board plow that put the fertilizer about six inches deep.

Grain was planted with the Johnson grass already growing on the land. The block produced twice as many bales of hay as unfertilized land on the first cutting. After the first cutting, the growth was much better than unfertilized plots and the color was a decidedly darker green.

Farm Ponds Give Better Fishing If Fertilized

Most farm ponds in Arkansas will give a lot better fishing if they are fertilized regularly, Extension Forester Harold A. Howell declared recently.

The University of Arkansas College of Agriculture specialist pointed out that fertilizer promotes the growth of foods needed by bream, bass or crappie with which ponds are stocked. And if these fish get plenty of the right kind of food, they will grow large enough to provide both good sport and good eating.

Only source of water for most ponds is that which runs off surrounding slopes, Mr. Howell explained. This water is usually sterile and will not support much vegetative growth. But fertilizer, added to the pond periodically, increases the growth of such micro-organisms as algae. This, in turn, is consumed by insects, crawfish, tadpoles, and some species of fish—all of which furnish food for game fish.

Test have shown that fertilization will sometimes more than triple the annual weight increase that can be expected from fish in an unfertilized pond, the forester said.

One application of fertilizer will not get the job done, Mr. Howell emphasized. Ordinarily, ponds need to be fertilized 10 to 12 times a year. And the practice should not stop with the end of summer, but should continue on into early fall.

"It's easy to tell if the pond needs fertilizer," Mr. Howell said. "Simply stick your arm into the water up to the elbow. If you can't see your hand plainly because of the brownish color of the water, the pool has enough fertilizer."

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More Nitrogen Predicted by FAO

In a report prepared for the delegates at the fifth session of the Food and Agricultural Organization of the United Nations which met in Washington on November 21st, the world production of fertilizer nitrogen for the 1949–50 crop year is estimated at 4,200,000 metric tons, of which Europe would supply 2,200,000 tons.

The report stated that India expects to have in operation a new plant with a capacity of 70,000 tons of nitrogen, and Egypt a plant which will produce 31,000 tons. Some other underdeveloped countries are drawing up plans for new plants, it was added,

Production of nitrogen throughout the world during the 1948–49 season was estimated at 3,354,000 metric tons, surpassing the prewar (1936–38) level by more than 45 per cent. The biggest gain over 1947–48 was in Europe, which on the whole has recovered its prewar level of production, it was stated, although Germany's output is still low.

The United States and Canada, where a tremendous expansion in nitrogen production for ordnance purposes took place during the war, are now turning out chiefly ammonium nitrate, anhydrous ammonia, and nitrogen solutions for agricultural purposes, it was noted. These newer types of fertilizer material have risen in the past ten years from 7 to 25 per cent of the total supplies. The output of the older types, such as sulphate of ammonia, calcium nitrate, and nitrate of soda, has increased much less, while cyanamide output has not increased at all.

"Postwar demand for nitrogenous fertilizer has been heavy," the report continued. "Import requirements have been particularly pressing in Europe and Japan because of the war damage to fertilizer plants and the need for increased food production. Sulphate of ammonia, the most popular nitrogenous fertilizer in Europe and the Far East, was the most sought after and the most scarce. Dollar shortage added to the difficulties of obtaining supplies from the Western Hemisphere, which alone had export surpluses.

"Consumption is nearly four times greater than prewar in the United Kingdom and Austria, and nearly three times greater in the United States and Norway. In India, also, although total consumption is still quite small, it is nearly three times as large as prewar. In the rest of the Far East, however, except in Japan, supplies are still below the prewar level. United States, Canadian, and Chilean exports are made against dollars, except for the United States shipment to Japan and South Korea of 250,000 tons of nitrogen supplied by army ordnance, which is not a commercial transaction.

"The widespread increase in demand for fertilizers has been partly a result of government policies designed to stimulate food production and partly a result of the favorable ratio of fertilizer prices to the prices of farm products. Though wholesale bulk prices of fertilizers in some countries are about 50 per cent above prewar, and the prices to farmers probably at an even higher relative level because of higher freight rates and handling costs, prices of farm products in most countries are double or more than double prewar. The fertilizer industry is at last catching up with the new high level of demand, and from now on the rate of expansion, though continuing, is likely to be less rapid."

SOME BRITISH FERTILIZER PROBLEMS

(Continued from page 11)

to be valued in terms of their water-soluble phosphoric acid content—although, I believe, there is now some move being made to get this legislation rescinded. How much scope there is in the field of new fertilizers of the citric-soluble type was very clearly illustrated to us last week when we had the privilege of visiting the plant of the Tennessee Valley Authority at Muscle Shaols. You may be interested to know that a plant is now in the process of erection in England for the manufacture of triple super which is expected will be in production sometime in 1950.

I am afraid that I have rather drifted away from the subject of granulation. To return, approximately 70 per cent of the total sales of compound fertilizers is now in granulated form, representing something over 1,000,000 tons per year, and we are now mastering most of the teething troubles which are always a feature of any new project. I have here a few samples which may be of interest to members.

I am afraid that the time will not allow me to go into much detail on the granulating process but I will just indicate a few of the main features. The first method of granulation, and still widely used, was the mixing of the fine raw materials with water in a flat pan known as the Erich mixer, with which I have no doubt many of you are familiar. This has now largely been replaced by a rotary drum—thus giving continuous working instead of a batch process. These two methods relied upon their success the use of well-conditioned superphosphate.

Another method, which has attracted quite

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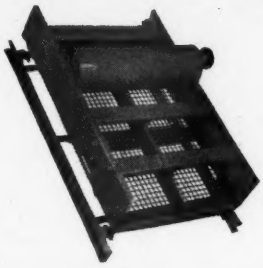

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a lot of attention recently, has been the combination of the super manufacturing process with granulation by the addition of the salts to the acid-phosphate slurry. This process has not yet been completely perfected and such troubles as low conversion of the phosphate, due to masking of the reaction by the addition of the salts, have been experienced.

There I must leave the subject but I and my colleagues in this team would be only too pleased to go into the subject in more detail with any of you that may be interested.

Problems of Material Supplies

I would now like to mention some of the problems which in Britain are basic and unalterable—apart from nitrogen production—as we have none of the fertilizer raw materials of our own. Sulphur we have to import from your country, pyrites from Spain for acid manufacture, rock phosphate mostly from North Africa, and potash from the continent—a large portion of which is imported from the Russian-controlled zone. We are making exploratory borings now in England with a view to examining the possibility of producing our own potash, but whether it can ever be an economic commercial undertaking remains to be seen.

At present, the British fertilizer industry is government-controlled inasmuch as all raw materials are purchased by the government and often sold at prices below cost. The price at which the farmer buys his fertilizer is also controlled by the government at subsidized prices. The purpose, of course, being a restraint on any increase in the basic cost of food. It has, however, been publicly announced recently that these subsidies are to be removed in two steps within the next two years but whether or not the government controls will also be removed is yet to be decided.

Before I close there are one or two points that I would like to make regarding the visit of this team to your country. During the war we received from you under lend lease arrangements triple superphosphate which was invaluable to us in our darkest hour. What we did not know and what I have only recently learned was that super was sent to us at a great personal sacrifice to many of you who had to use in its place low grade super often manufactured in obsolete machinery especially put back into operation for this purpose with its attendant difficulties which I, as a practical factory man, can fully appreciate. On behalf of the British fertilizer industry I would like to say "thank you."

Under Marshall aid we now have the opportunity of inspecting your industry and the way we have been received shows us how greatly interested you are in helping us to build up our economic stability. We have already collected much valuable information which we hope will be utilized to the full in British industry when we return, so as to improve our productivity and make us a little more self-supporting. Again on behalf of our industry I would like to say "thank you."

It is not the nature of the British to feel entirely happy at receiving such help without wanting to give something in return. I do feel that we have in the fertilizer industry developed in recent years along many new lines which may be of interest to you and I would in conclusion like to say on behalf of the fertilizer manufacturers in Great Britain that we would very much welcome a team representative of your industry to come to Britain and examine what we have. I assure you that we would extend to them a most hearty welcome and show them what we have got and, if we could entertain some of you, the chance of returning the hospitality, which has been such a significant feature of our tour so far, would indeed be a real pleasure.

Fertilized Nebraska Wheatland Pays Off

Nitrogen fertilizer applied both in the fall and spring paid big dividends this year on a University of Nebraska field test plot in Cass County, Nebraska according to a report compiled by Dr. M. D. Weldon, extension soils specialist.

Ten pounds of nitrogen were applied in the fall and the 30 pounds of available phosphate and the other 30 pounds of nitrogen were applied in the spring. The yield was 34 bushels of wheat. This is compared to an unfertilized field that made 20 bushels per acre.

A superphosphate application alone brought 27 bushels in another plot. Nitrogen fertilizer alone produced a 23-bushel yield.

The conclusion that the combination of fertilizers was profitable is figured this way: The cost of 30 pounds of available phosphate is $2.40 to $3, while 40 pounds of nitrogen costs $4.80 to $6. At the current market of $1.89 for No. 2 wheat the seven-bushel increase in yield produced by about $3 worth of phosphate made a profit of $10.23 per acre. The 13-bushel increase resulting from applying $9 worth of phosphate and nitrogen yielded a net profit of $15.57 per acre.

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FALL CONVENTION OF THE NATIONAL FERTILIZER ASSOCIATION

(Continued on page 9)

and songs and dances by Miss Atlanta of 1949.

Among the many guests of honor introduced at the banquet were members of the press covering the convention, the members of the United Kingdom fertilizer industry team, and officials of the U. S. Department of Agriculture and of several nearby State agricultural experiment stations.

Wednesday, November 16th

The final session of the Convention on Wednesday morning was addressed by John L. Liles, Jr., agricultural economist of the Federal Reserve Bank of Atlanta.

Speaking on "The Banker Looks at Agriculture," Mr. Liles stated that in lending money to the farmer, bankers will request far more details about his plans than asked for in the past. The man, the land, and the plan are three items which will be given careful scrutiny. Liles declared that bankers will exercise closer supervision over their farm customers to see that the land is being wisely managed. He expressed the belief, in addition, that more banks will maintain field men or farm service departments, thereby developing a trend of the last few years. Finally, said Mr. Liles, bankers will pay greater attention to the farmer as a business man, and less attention to the collateral offered.

As the farming picture changes, said Mr. Liles, farmers will require an increasing amount of capital for machines, for seeding, and for fertilization, and for reorganization of their farming pattern. At the same time, farmers will likely be faced with decreasing ability to obtain loans because of lower net income from their operations, due in part to restrictions on crop acreages and partly to lower prices.

The general problems facing farmers and bankers alike, said Mr. Liles, are the following: (1) the volume of cash crops is still too high to be absorbed at present price levels, with the consequence that there must be readjustments in volume or prices; otherwise, a greater tax burden will have to be placed on the general public. (2) The land diverted from cash crop production, as well as other farm land, must be made to yield additional income. (3) The establishment of grassland crops, however desirable, requires the extension of longer loans than banks commonly have granted in the past.

The Convention then witnessed a showing of the new 20-minute sound-and-color film, "New England's Green Pastures," which was produced by agricultural and industrial leaders of New England with the cooperation of the N. F. A. staff.

The film had its first public showing in Boston on November 18th before a distinguished gathering of government officials, bankers, fertilizer executives and agronomists.

The closing feature of the Convention was a panel discussion, "How To Tell the Soil Improvement Story," participated in by Chairman Channing Cope, farmer, author and radio columnist of Atlanta, Ga.; James M. Eleazer, information specialist, Clemson Agricultural College, Clemson, S. C.; L. R. Neel, editor, *Southern Agriculturist*, Nashville, Tenn.; Alexander Nunn, managing editor, *The Progressive Farmer*, Birmingham, Ala.

According to Mr. Cope, four main points should be kept in mind: First, that the land can be made to live again; second, that we can increase the feeding value of grasses through fertilizer: third, that the use of crop residues is more valuable than is the plowing under of crops; and, fourth, that the responsibility of the local fertilizer dealer and banker in increasing their knowledge of farm problems should be recognized and developed.

Appreciation of the soil and of the need for its conservation is fundamental in telling the story, said Mr. Neel. Information can be disseminated through colleges, experiment stations, radio stations, the fertilizer industry, and other media. Mr. Neel particularly urged greater utilization of the colleges as sources of soil-improvement information.

The soil improvement story should reach some 35 million families in this country, said Mr. Nunn, and has a potential audience ranging from big business personnel to congregations of country churches. Clergymen particularly, he feels, are recognizing the importance of teaching soil conservation. Mr. Nunn also urged full utilization of farm magazines, newspapers, radio and other potential media to reach all types of farmers.

James M. Eleazer in his remarks called attention to the rapid changes, particularly in the raising of profitable crops, through which the South has gone in the last few generations and to the ways in which science has met the farmer's problems. In his opinion, nothing equals farm tours for telling the soil improvement story. He emphasized the value of grassland farming, but urged that the needs of a farmer's family to feed and clothe itself while carrying on the soil-building program always be considered.

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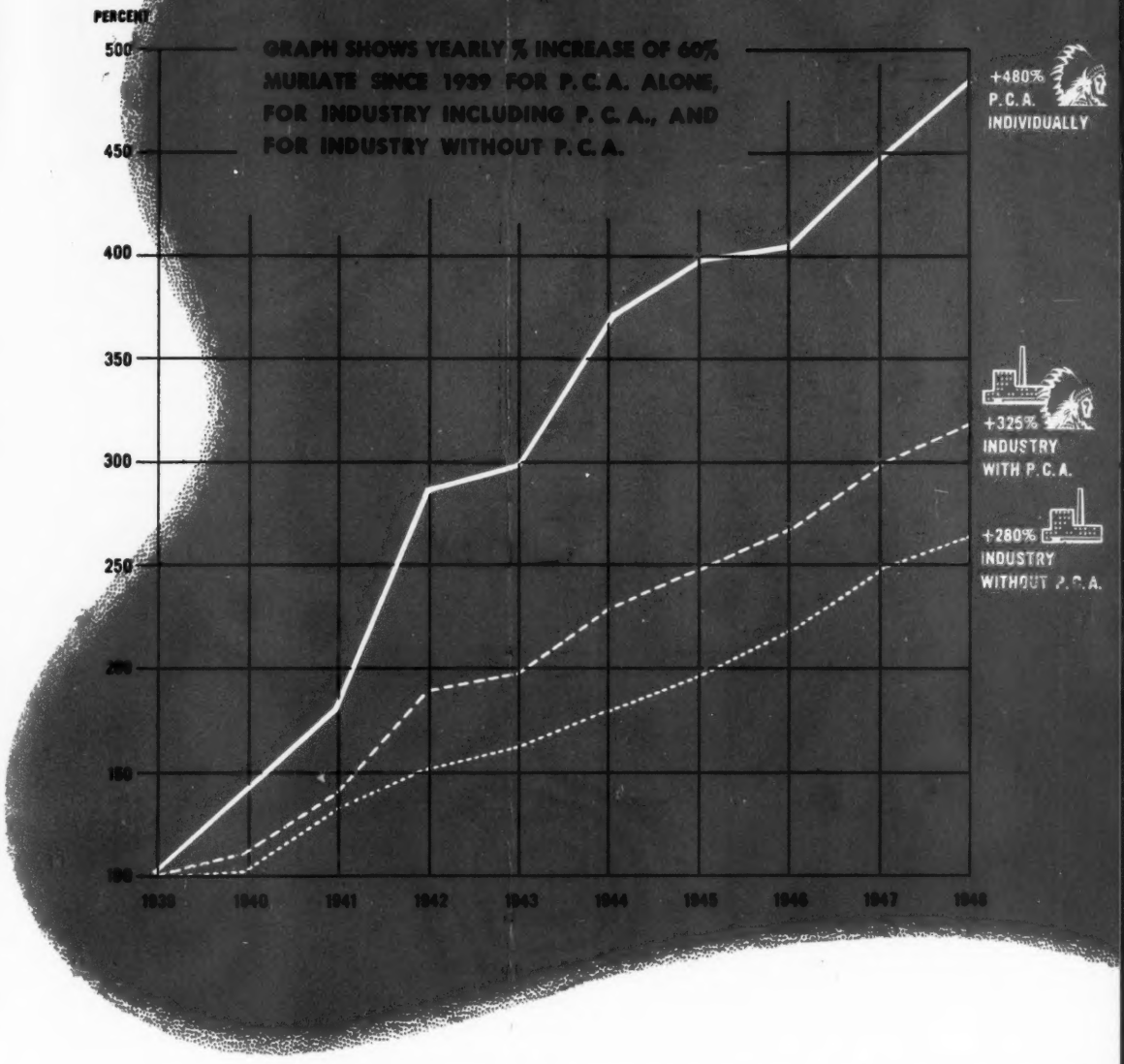

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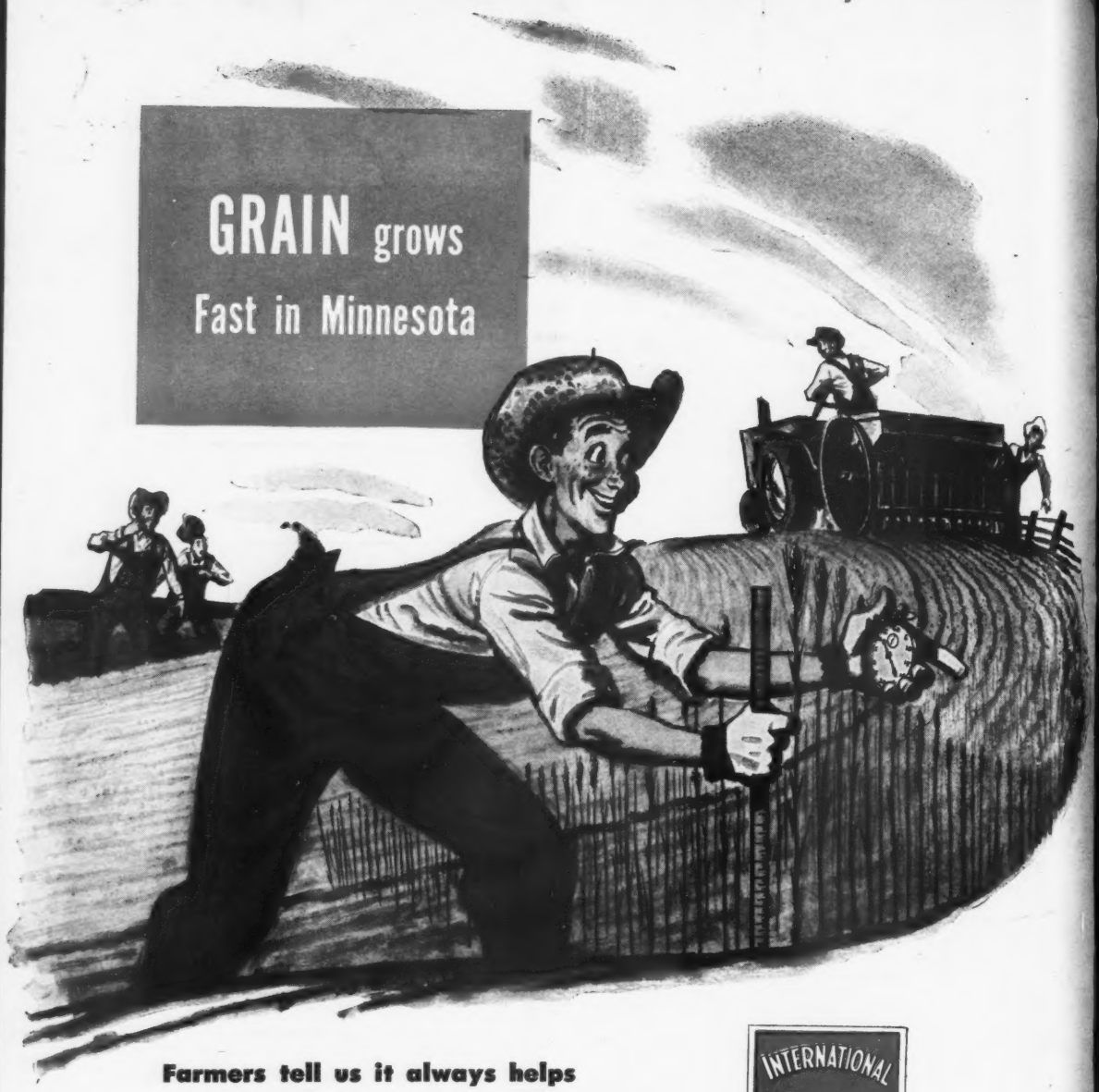

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